

MISCELLANEA.

SYNONYMY IN CORETHRINAE.—Many recent authors have followed Theobald (Gen. Ins., Fasc. 26) (1905) in referring to *Sayomyia*, Coq., most of the species till recently incorporated under *Corethra*, Mg., but the American author's genus must give way, on his own admission,¹ to *Chaoborus*, Lichtenstein, established as long ago as 1800; so that a few synonymical notes may be useful.

Corethra, Mg. (1803), was originally erected (Illig. Mag., ii, 260) for the *Tipula culiciformis* of De Geer (1776); and for many years it contained only that species, with *pallida*, F. (1781), and *plumicornis*, F. (1794). It was not until 1823 that another species was added,—*punctipennis*, Say., followed by *flavicans*, Mg., in 1830 and others of more recent date.

Mochlonyx, Loew (1844), was formed for *Corethra velutina*, Ruthe, and to this genus has been added *effoetus*, Wlk., and actually *culiciformis*, De Geer (!), the very type species of *Corethra*; even Prof. Kertész, in his catalogue of the world's diptera (vol. i, 1902), making the same error.

Theobald (Gen. Ins.) admitted Corethrinae as a subfamily of Culicidae and correctly replaced *culiciformis* in *Corethra*, with *velutina* (*effoetus*, Wlk., being added as synonymous with this)² and a third, recently described species, *cinctipes*, Coq. Therefore, unless *velutina* can be generically separated from *culiciformis* (and I have no means of forming an opinion on this), *Mochlonyx* must sink in favour of *Corethra*, Mg.

Schiner (Fauna Austr., ii, 624) placed *velutina* and *effoetus* (the latter not described, not being Austrian) in *Mochlonyx*; and placed *culiciformis* (also undescribed for the same reason), with the names of five other undescribed non-Austrian species, after his description of the three Austrian species (*pallida*, *plumicornis* and *fusca*) of *Corethra*. It is quite possible that he may not have seen all these species, and therefore his generic separation of *velutina* and *culiciformis* may not have represented an individual opinion.

Chaoborus, Lichtenstein, was erected for "*antisepticus* sp. nov.," which proved synonymous with *crystallina*, De Geer, this latter, queried by Theobald (Gen. Ins.) as synonymous with *plumicornis*, F., being definitely given by Kertész as identical with it.

¹ Proc. U. S. Nat. Mus., vol. 37, p. 603 (1910).

² As Mr. Theobald has presumably examined the type of Walker's species, some importance attaches to this opinion.

Now *plumicornis*, F., *pallida*, F., and *punctipennis*, Say. (a North American species), with others, are retained by Kertész under *Corethra*. This is obviously wrong, since Loew's principle in establishing *Mochlonyx* was a sound one, *i.e.*, "metatarsus several times shorter than the next tarsal joint," as contrasted with those species in which the metatarsus is longer than the 2nd tarsal joint.¹ The separation of these groups is justified: Loew lost his genus through unfortunately giving the name *Mochlonyx* to that group of species containing the type species of *Corethra*, Mg. Of course, in the days in which he wrote it was sometimes not easy to distinguish which species was intended by an author as the type of his genus² and this may have authorised him to split off any group, or particular species at will.

Corethra, Mg., must therefore always stand for *culiciformis*, with its congeners.

Coquillett in 1903 erected *Sayomyia* for "*Corethra punctipennis*" Say., which he admitted as congeneric with *plumicornis*, F. (the latter species possessing *crystallina*, De G., and others as synonyms), both of which species have now to be placed in *Chaoborus*.

The synonymy of the species immediately concerned will stand thus:—

Corethrinae (Subfamily of Culicidae.)

CORETHRA, Mg., 1803.

(*Mochlonyx*, Loew, 1844.)

1. *culiciformis*, De Geer (*Tipula id.*). TYPE of genus.
2. *velutina*, Ruthe (*Mochlonyx id.*, Loew; TYPE of *Mochlonyx*) (*effoctus* Wik.).
3. *cinctipes*, Coq.

CHAOBORUS, Lichtenstein, 1800.

(*Sayomyia*, Coq., 1903.)

1. *plumicornis*, F. (*Tipula id.*). TYPE of genus.
2. *punctipennis*, Say. (TYPE of *Sayomyia*).
3. All other species referred to *Sayomyia* since Theobald's acceptance of the genus, but previously placed in *Corethra*.

The three other genera recorded by Theobald appear to me built on very weak characters and I should prefer to regard them as subgenera of *Chaoborus* only. Each contains but one species. They are *Pelorempis* (Joh.) *americana*, Joh., *Corethrella* (Coq.) *brakeleyi*, Coq., and *Eucorethra* (Underwood) *underwoodi*, Underw.

E. BRUNETTI.

¹ Theobald (Gen. Ins.) is distinctly wrong in terming the joint following the metatarsus as the first, since the *metatarsus itself is the 1st tarsal joint, the succeeding joint being the second.*

² I have seen it stated somewhere that Meigen placed what he considered all the most typical species in the middle of the genus, and those tending to aberration at one end or the other of it.

FURTHER NOTES ON INDIAN *Phlebotomi*.—The recent acquisition of a number of specimens of *Phlebotomus* from different parts of India and especially from Ceylon enables me to amplify the notes published in these "Records" last year (vol. iv, No. ii, pp. 35—52), and I have been helped greatly to gain a true appreciation of certain characters by frequent discussions with Mr. E. Brunetti.

Hitherto I have laid great stress on the relative lengths of the different parts of the second longitudinal vein as a specific character, but these lengths are evidently more variable than I thought. They would provide a method of separating a species such as *P. himalayensis* from one such as *P. argentipes* at a glance, but in the latter the length of the upper branch of the vein, and consequently that of the other parts also, varies within fairly wide limits. I have had, therefore, to recognize that the form recently described by me as *P. marginatus* is not a "good" species but merely a colour variety of *P. argentipes*.

Regarding the sanitary importance of *Phlebotomus* attention may be directed to a paper just published by Major F. Wall, I.M.S.¹ The facts cited suggest (1) that troops moved into certain barracks in Chitral become infected with a fever akin to or identical with what is called *Papatacifeber* in Austria, these barracks being frequented by *P. papatasi* and *P. babu*, and (2) that men from districts in which these two species occur are less liable to suffer from this fever (having perhaps become to some extent immune) than those from districts in which the common species are *P. major* and *P. himalayensis*.

Phlebotomus argentipes, Annandale and Brunetti.

Rec. Ind. Mus., iv, p. 44, pl. iv, fig. 3, pl. vi, fig. 6; *Spolia Zeylanica*, vii, p. 59.

I have recently examined a good many specimens from Peradeniya, which is situated in the interior of Ceylon at an altitude of about 1,500 feet. The species occurs all over the plains of India except in the extreme north-west. Apparently it does not occur in the Himalayas.

Var. *marginatus*, Annandale.

P. marginatus, *Spolia Zeylanica*, vii, p. 62, fig. 7.

This form cannot be regarded as more than a colour variety, distinguished from the typical form of *P. argentipes* by the fact that the dorsum of the thorax is brown instead of black and the sides of the thorax rather darker than in the typical form.

The var. *marginatus* occurs in Calcutta as well as at Peradeniya and is apparently not a seasonal form.

¹ *Ind. Med. Gazette*, xlvi, p. 41 (1911).

Phlebotomus major, Annandale.

Rec. Ind. Mus., iv, p. 46, pl. v, fig. 4, pl. vi, fig. 4.

Specimens appear to be invariably larger than those of *P. argentipes*, from which both the typical form and the variety here described may be distinguished by the fact that the dorsum of the thorax is never black or brown.

Var. *grisea*, nov.

Distinguished from the typical form by the general greyish or brownish (instead of golden) colour.

I took several specimens in a house at Kurseong in the Darjiling district (alt. 4,700 feet) in June, 1910, and also saw the variety in the same house in April, 1911. The two varieties are easily distinguished by the naked eye.

Phlebotomus babu, Annandale.

Rec. Ind. Mus., iv, p. 49, pl. iv, fig. 1, pl. vi, figs. 3, 3a; *Sporia Zeylanica*, p. 61.

As I have pointed out in a recent paper, this species is probably identical with "*Hebotomus*" *minutus*, Rondani, but it is impossible to state that it is synonymous without a comparison of specimens. I have recently obtained specimens of *P. babu* from Peradeniya in Ceylon and from Drosh in Chitral in the Hindu-Kush Mountains (4,700 ft.). The species is probably distributed all over the plains of India and ascends the Western Ghats to an altitude of at least 2,000 feet, but is not known from the Himalayas.

Var. *niger*, nov.

Darker than the typical form and as a rule larger.

This form was at first regarded as a distinct species and is marked as probably being so in Mr. F. M. Howlett's collection. I cannot, however, distinguish any constant difference in its venation or genitalia.

As yet the variety has only been taken in Bihar. I have not seen it in Calcutta.

Phlebotomus papatasi (Scopoli).

Rec. Ind. Mus., iv, p. 51, pl. iv, fig. 4, pl. vi, fig. 2.

I have recently received specimens from Drosh, Chitral (Major F. Wall, I.M.S.), and from Quetta, Baluchistan (Lt.-Col. Wimberley, I.M.S.). The species appears to be common, together with *P. babu*, all over the north-west of India, ranging as far east as Pusa in Bihar.

N. ANNANDALE.